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GILBERT WHITE AND HIS SUSSEX CONNECTIONS.

BY THE REV. PREBENDARY H. D. GORDON, M.A.

[In 'The Zoologist' for August last (pp. 295—301) the Vicar of Harting, in which parish Gilbert White's parents for some time resided (*vide antea*, p. 202), gave a most interesting account of the family and its connections with Sussex. Continuing his researches, he has been good enough to communicate to us the following additional remarks, which illustrate the extent of White's out-door observations in Sussex while resident at Selborne, in the adjoining county of Hants.

It is hardly necessary to remind our readers that the diaries quoted by Mr. Gordon were long ago brought to the notice of the public by the late Edward Jesse, who in the second series of his 'Gleanings in Natural History' (pp. 144—210), published copious extracts from them. This, however, is no reason why they should not again be utilised for the present purpose, especially as the extracts selected are followed by the comments of so good an observer as Mr. Gordon, resident in the county to which they relate.]

THE complete diaries of Gilbert White for nearly twenty-five years (1768—1793, perfect to June 15th, 1793, and filled in to June 22nd, four days before his death) constitute a literary treasure. They were purchased by the British Museum in 1881, from the Rev. G. Taylor, who had the volumes from a Mr. G. Soaper. Like all White's productions, they are exquisite in workmanship, faultless in neatness and precision to a day, and even an hour, and most delectable study. Again and again you begin a new year with him feeling that you are in far closer

ZOOLOGIST.—DEC. 1893.

2 M



contact with him than before, as he guides you from the dismal dark days of midwinter to the hopes of spring even in January, and to the many "sweet days" to follow—his favourite quotation from George Herbert—by far the majority of the days of the year have their appropriate natural history observation. The idea of the diary, and so of the 'Selborne,' came from Hon. Daines Barrington, "The Inventor" (*sic*) of the diaries or calendars of observation, one of which was annually presented to G. White, from 1768 onwards. Perhaps it was too much flattery to say that the dross of Bishop Pearson was fine gold; but the residuum of Gilbert White, after the materials utilized in his 'Selborne' were extracted from the venerable old diaries, is still golden to the bottom of the pot. The volumes, now six in number, as a piece of biological archæology, ought to be some day printed *verbatim*. They show how gradually White felt his way to his conclusions, how he repeated his observations (for example, how in his regular harvest excursion in September and October he noted the Ring Ouzels on the Sussex Downs year by year), how he sometimes most patiently corrected mistakes, how he omitted doubtful evidence, and how wide a tract of country fell under his observation. When a man whose head-quarters are East Hants tells you exactly where he was to a day, and even an hour, for twenty-five years, it is likely that, however retired the autobiographer may be in his habits, he will show that he spent his days in many parts of counties so diversified, and yet so interconnected, as are those of Hants and Sussex.

The object of the present sketch is to trace, day by day, Gilbert White's sojourns in the South Downs and other Sussex localities. This has never been done before, and cannot fail to interest the Sussex reader. His 'Selborne' tells us how much he admired the South Downs, "heaving their broad backs into the sky," how "their gentle swellings and smooth fungus-like protuberances, their fluted sides, and regular hollows and slopes, carry at once the air of vegetative dilatation and expansion" (Letter xvii.). The diaries show that he visited Sussex and its downs regularly, save in 1774, every year from 1768 to 1779. One day, Nov. 13th, 1771, he saw no less than sixteen Fork-tailed Kites at once on the downs near Ringmer. He generally visited Chilgrove, both on the way to Ringmer, near Lewes, and again on returning. It will be news to Sussex readers that Gilbert

White has references to Goodwood, Midhurst, Iping, Uppark, Harting, and Funtington.

Three days of eight hours—twenty-four hours in all—were all that were available for the study of twenty-five years' diaries at the British Museum, that is one hour for each year, to study, compare, and transcribe notes which sometimes, as in the time of his deafness (Sept. 13th, 1774), were very voluminous. It will be pardonable, therefore, if there are some omissions in the evidence submitted.

The first volume has the following entry :—" 1768, Sept. 30 : Stares (Starlings), flock at Chilgrove. Stone Curlew does not flock yet." It will be remembered that the information about Stone Curlews was supplied by Mr. G. Woods, of Chilgrove. Almost to a day a similar entry occurs the following year, 1768, Oct. 1st: " Harvest pretty nearly finished this evening; some wheat out at Harting [as he was returning from Chilgrove to Selborne]; roads much dried." 1769: "Sept. 12: Wheatears (*Enanthe*) still caught on East Sussex Downs. Sept. 18th: Bustards on the downs, Ringmer. G. W. stayed at Ringmer till 30th September."

Elsewhere in this diary White says that he saw Bustards, Feb. 13th, 1770, on Salisbury Plain, and that when seen on the downs they resemble Fallow Deer at a distance. " 1770: Chilgrove, Oct. 2, 3, 4. Oct. 2: Ring Ouzel on Harting Hill." No doubt on the down near Two Beech Gate, and on the road to Chilgrove. "Oct. 3: Ring Ouzels again on the downs eastward." These are part of the observations on the Ring Ouzel which he claimed to have discovered as a summer migrant, and which he says were cantoned all along the downs and coast of Sussex, as specially observed by him in the autumn of 1770 (Letter xxxviii.). Ringmer, at Mrs. Snooke's house a fortnight, Oct. 5th—19th. First observations on Crossbills, amongst Mrs. Snooke's Scotch pines. Chilgrove again, Oct. 19th, 20th: "Vast floods on the Sussex rivers. They call their meads by the river-side 'brooks' in Sussex."

" 1771, April 1. Mr. Woods, of Chilgrove, had, on this day, twenty-seven acres of spring corn wheat not then sprouted out of the ground; and yet he had a good crop from those fields, not less than four quarts to the acre." July 22nd—27th, Gilbert White visits Funtington, where he finds "Peas cut; turnips failing and resown." Oct. 30th, 31st, Chilgrove. "Curlews (*i. e.*

Stone Curlews) have cried here within these few days. Haws fail here. An imperfect rainbow in the fog; a more vivid one on the dewy grass. Grey Crows near Southwick. Mr. Woods saw many Redwings about the 31st October. Nov. 2: Mrs. Snooke's Tortoise begins to hide himself for the winter." This is the first mention of "Timothy," the immortal Tortoise, who lived fifty-four years, fourteen of which were spent at Selborne. "Nov. 1: Mrs. Snooke's Tortoise begins to scrape a hole in the ground for laying up. The vale of Bramber and the river enveloped in a vast fog; the downs were clear. Three House Swallows, Nov. 4, at Newhaven, mouth of the Lewes river, flying briskly; and *Phyteuma orbicularis* ('the Pride of Sussex') in bloom on downs south of Lewes. Nov. 8: few petrifications about Ringmer and Lewes. Ringmer soil not clay at top, but brick-loam; bears good apples, pears and grapes, the clay under which holds water like a dish. The trees are mostly elms. Nov. 11: Tortoise comes out in the sun about noon, but soon returns to his work of digging a hole to retire to. Nov. 13: saw sixteen Fork-tailed Kites at once on the downs. An epidemic disease amongst the dogs in Sussex, which proves fatal to many; they pine away and die moping. Chilgrove, Nov. 15: Tortoise at Ringmer had not finished his hybernaculum, being interrupted by the sunny weather, which tempted him out."

1772. This was the year in which the explosion of the powder mills at Hounslow "shook the windows at Selborne, Jan. 6." "May 21: at Midhurst and Findon, *en route* for Brighton and Ringmer next day. Tortoise eats. Flycatcher appears." From this visit Gilbert White returned *viâ* Arundel and Chilgrove to Selborne, where he arrived on June 6th.

1773. December 1st, Chilgrove: "Birds on the downs are Rooks, Larks, Stonechats, Kites, Gulls, some Fieldfares, some Hawks. Not one Wheatear to be seen on the downs yet." They were, of course, absent on winter migration. "Grubs of *Scarabæus solstitialis* abound on the downs; the Rooks dig them out. On what do they feed when they come forth? for there are no trees on the South Downs. The county of Sussex abounds in turnips. The Tortoise in Mrs. Snooke's garden went underground Nov. 21st; came out on 30th for one day, and retired to the same hole; lies in a wet border in mud and mire! with its back bare. In the late floods the water at Houghton went over the clappers, and at Bramber into men's ovens. Dec. 11: flocks of Chaffinches

and multitudes of Buntings at the foot of Mt. Caborn. Rooks visit their nest-trees every morning just at the dawn of day, being preceded a few minutes by a flight of Daws; and again about sunset. At the close of the day they retire into deep woods to roost (Ringmer). Dec. 15, Findon: large Gulls on the downs. Some Bustards are bred in the parish of Findon. Fieldfares. The shepherds do not take any Wheatears west of Houghton Bridge. Dec. 16, Chilgrove: Chaffinches; many cocks among them. Black Rabbits are pretty common on Chilgrove Warren.

"The parish well in Findon village is 200 feet deep. At Moutham on the down the well is full 350 feet. Mr. Wood's well at Chilgrove is 156 feet deep, and yet in some very wet seasons is brimfull; his cellars are sometimes full." He reaches Selborne Dec. 18th. It should be added that in 1773, June 22nd—24th, "The King (George III.) came down to Portsmouth to see the fleet. The firings at Spithead were so great that they shook this house (The Wakes, Selborne). They were heard on those days at Ringmer, two miles east of Lewes, in Sussex, and at Epsom, in Surrey."

In 1774 there is apparently no mention of the South Downs and Sussex.

1775. March 31st. Gilbert White is again at Midhurst. June 24: Here we have an anecdote apparently picked up at Midhurst: "A person assures me that Mr. Meymott, an old clergyman at Northchapel [near Petworth], in Sussex, kept a Cuckow in a cage three or four years, and that he had seen it several times, both winter and summer. It made a little jarring noise, but never cryed 'cuckow.' It might perhaps be a hen. He did not remember how it subsisted." This anecdote, which has been paralleled in Sussex again by the Cuckoo kept at Westbourne Workhouse for three years, half tame,—and silent, as reported to the 'West Sussex Gazette,' 1886, by Dr. F. H. Arnold,—is not mentioned in the Nat. Hist of Selborne. As an instance of the great care with which the compilation was made, it may be noted that the mentor, probably T. White, writes in red pencil: "Is Mr. Meymott or any of his family alive, who might confirm the above account?" No reply is entered, and the story is accordingly suppressed. The diary continues: "1775. Chilgrove, Aug. 2: Wheat harvest is general all along the downs. When I came just beyond Findon I found Wheatear traps which had

been opened about a week. The shepherds usually begin catching in the last week in July. Ringmer, female Viper taken full of young, 15 in number; gaped and menaced as soon as they were out. Aug. 7: Timothy, Mrs. Snookes' old Tortoise, which has been kept full 30 years in her court before the house, weighs six pounds three quarters and one ounce. It was never weighed before, but seems to be much grown since it came. (Mentor's note, 'Pray let it be weighed every year'). Aug. 12: Full moon. High tides frequently discompose the weather in places so near the coast, even in the driest and most settled seasons, for a day or two. Aug. 14: Two great Bats [*V. noctula*] appear. They feed high, and are very rare in Hants and Sussex. Low fog. G. W. observed *Cimex linearis*. Also at Chilgrove, Rabbits. Rabbits make incomparably the best turf; for they not only bite closer than larger quadrupeds, but they allow no bents to rise; hence warrens produce much the most delicate turf for gardens. Sheep never touch the stalks of grasses." This passage is given in the "Observations on Quadrupeds," which now is bound with the 'Selborne,' but it is quoted to prove that it was strictly, as the diary shows, an observation made in Sussex. When White returned to Selborne, Aug. 19th, he found the wheat harvest finished, and noted, "Harvest weather much finer at Ringmer than at Selborne." He had evidently greatly enjoyed his Sussex trip in 1775.

"1776. August 15. Chilgrove: Showery." In one of his late expeditions he got thoroughly wet through on the Downs, and seems to have remembered the lesson. Aug. 16th, Ringmer; Aug. 26th, Isfield; Aug. 27th, Ringmer; Aug. 29th, Findon. Aug. 31st, Chilgrove: Arriving at Selborne that Saturday apparently between 4 p.m. and 8 p.m., as marked in the diary, 8 p.m., sun; 12 noon, sun and cloud; 4 p.m., fine harvest day; 8 p.m., Selborne. The last letter is looped to about an hour before 8, so exact was he in chronicling time. No doubt he preached an old sermon at Selborne Church on Sunday, Sept. 1st, 1776. It was in the low damp water-meads of the Ouse, at Ringmer and Isfield, that the observation of the friendship between the Wagtails and Cows, which is given in "Observations on Birds" ('Selborne'), was originally made. "While the cows are feeding in moist low pastures, broods of Wagtails, white and grey, run picking run round them close up to their noses, and under their very bellies, availing themselves of the insect flies that settle on

their legs, and probably finding worms and larvæ that are roused by the tramping of their feet. Nature is such an economist that the most incongruous animals can avail themselves of each other! Interest makes strange friendships." Ringmer, Aug. 28th: "The Tortoise eats voraciously; is particularly fond of kidney beans. Chilgrove, Aug. 30: Mr. Woods, of Chilgrove, thinks he improves his flock by turning the east country poll-rams amongst his horned ewes. The east country sheep have shorter legs and finer wool, and black faces and spotted forelegs, and a tuft of wool in their foreheads. Much corn of all sorts still abroad. Was wetted through on the naked downs, near Parham Ash [query, where is this?]. Some Cuckows remain. Nov. 30: Mrs. Snookes' old Tortoise, at Ringmer, went underground." With regard to the entry of Mr. Woods and the South Down sheep, I have ventured in the 'History of Harting,' p. 208 (1877), to state that Gilbert White's facts concerning the South Downs were mainly collected in the neighbourhood of Harting. The reviewers, who were in the main very kindly, suggested that all the facts about the South Down sheep were collected by G. White at Ringmer, Lewes, judging from the dates of the "letters"; but the diary proves that Mr. Woods was the informant, and therefore my text was strictly true, and the inference of the reviewers wrong.

1777. This year an entry is made which shows that Gilbert White's observations ranged over a wide district of our neighbourhood. "On July 29th such vast rains fell about Iping, Bramshott, Haslemere, &c., that they tore vast holes in the turnpike roads, covered several meadows, carried away part of the county bridge at Iping, and the garden walls of the paper mill, and endangered mill and house. A paper mill was ruined at Haslemere; a post-boy drowned, and another as he was passing from Alton to Farnham. The gent. in the chaise saved himself by swimming. These torrents were local, and were not felt at Lewes." Under date Sept. 15th White notes the migration of Crossbills at Ringmer. He stays Sept. 15th at Shopwick, near Chichester, and Sept. 19th at Chilgrove.

There is a kind of cadence in the lovely passage on Farnham bells, heard at Moreland, March 10th, 1793, and reminding one of Moore's "Sweet evening bells," "And so 'twill be when I am gone." It will probably be a *locus classicus* to the admirers of Gilbert White. "The sweet peal of bells" at Farnham heard up

the vale of a still evening is a pleasing circumstance concerning this situation, not only as occasioning agreeable associations in the mind, and remembrances of the days of my youth when I once resided in that town, but also by bringing to one's recollection many beautiful passages from the poets respecting the tuneable and manly amusement of bell-ringing for which England is so remarkable. Of these none are more distinguished and masterly than the following:—

Let the village bells, as often wont,
Come swelling to the breeze and to the sun
Half set, ring merrily their evening round.
It is enough for me to hear the sound
Of the remote exhilarating peal,
Now dying all away, now faintly heard,
And now with loud and musical relapse
The mellow changes pouring on the ear."

—*The Village Curate.*

On March 15th, 1793, we have the last glimpse of his South Downs—a day of great vigour:—"My brother and I walked up to Bentley Church, which is more than a mile from his house, and on a considerable elevation of ground. From thence the prospect is good, and you see at a distance Cruxbury Hill, Guild-down, part of Lethe (Leith) Hill, Hindhead, and beyond it the top of one of the Sussex Downs [Query, which is this?]. There is an avenue of aged yew-trees up to the church, and the yard, which is large, abounds with brick tombs, covered with slabs of stone; of these there are ten in a row, belonging to the family of the Lutmans. The church consists of three ailes (aisles), and has a squat tower, containing six bells. From the inscriptions it appears that the inhabitants live to considerable ages. There are hop-grounds along the north side of the turnpike road, but none on the south towards the stream. The whole district abounds with springs. The largest spring on my brother's farm issues out from a bank in the meadow, just below the terrace. Somebody formerly was pleased with this fountain, and has, at no small expense, bestowed a facing of Portland stone, with an arch and a pipe, through which the water falls into a stone basin, in a perennial stream. By means of a wooden trough this spring waters some part of the circumjacent slope. It is not so copious as Well

head." This passage will be a discovery for the Selborne proposers of the Water Fountain Memorial, exactly in keeping with Gilbert White's own approbation at Bentley, his brother's estate. And it shows how Selbornian is the noble idea of giving pure water from Cissbury to Worthing, that has suffered so sorely. Homer would call it a work of the gods.

And here end (1778) the yearly visits of Gilbert White to Sussex, which seem to have been his wont from 1754 at least,—twenty-four years,—as recorded in a previous article. There are one or two notable mentions, however, of Sussex in the later diaries, which shall form our conclusion. 1778 has a brief record: "Sept. 23 and Oct. 9, Chilgrove: Ring Ousels. No Stone Curlews. Oct. 24: Shopwick. Oct. 26: Distress for water at Ringmer." The constant mention of "Timothy," now residing at Selborne, are somewhat tedious; but a passage shall be quoted to show that White wrote playfully sometimes, as when he wrote about the "majestic mountains of the Southdowns"; and Lowell, who must have been Scotch, could not appreciate the joke. With "majestic Southdowns" compare the playfulness of the following: "Sept. 1787: Timothy, the Tortoise, who has spent the last two months amidst the umbrageous forests of the asparagus beds, begins to be sensible of the chilly autumnal evenings." 1782, Aug. 3rd, twenty-six days before the 'Royal George' sank, White noted a vast shower near Petersfield. 1784, the first Swallow was seen near Petersfield by G. W., April 12th. 1788, April 19th: "The voice of the Cuckoo is heard in the land," quoting Canticles, and so nearly matched the spring advent of Milton's bird of hate, punctual then as now. "1789, April 17, *Cuculus cuculat*" (quoting Linnæus): "The voice of the Cuckoo is heard in Blackmoor Woods." Two entries about Up Park and Goodwood remain. "1788, July 6: The late burning season has proved fatal to many deer in elevated situations, where the turf being quite scorched up, the stock in part perished for want. This is said in particular to have been the case in Up Park, in Sussex. A want of water might probably have been one occasion of this calamity. Some Fallow Deer have died in the Holt." Alas! 1893 was also fatally dry for the poor deer. With regard to Goodwood, the entry is 1792, Oct. 9th: "Selborne: The sound of great guns was heard distinctly this day to the S.E., probably from Goodwood, where the Duke of Richmond has a detachment

from the train of artillery encamped in his park, that he may try experiments with some of the ordnance." This year, 1792, has, April 13th, a Swift, which seems miraculous, but no doubt did happen. Also wild mushrooms at the same time, April 13th, 1792. In 1793 we seem to enter the valley of the shadow. But he was still in full vigour, both of mind and body.

To the last the diary was posted up, and prepared till within three days of the actual death, June 26th, 1793. He saw his last Flycatcher May 24th that year, remarking that it was four days late. His last extended entry is June 9th, 1793. "The water at Kingsley Mill begins to fail. The land spring in the Stoney lane, as you go to Rood, stops. We draw much water for the garden; the well sinks very fast. The ground all as hard as iron; we can sow nothing, nor plant out." June 14th. Mr. John Mulso, the old Winchester College boy, Prebendary of Winchester and Salisbury, and brother of Mrs. Chapone (Hester Mulso), White's oldest college friend at Oriel, Oxford, came for a last glimpse, and his old friend notes in his very last entries: "June 14 Mr. John Mulso came, June 15 Mr. J. Mulso left us." Probably he helped his friend, as a clergyman should, at the last. And so the naturalist of Selborne slept, in the midst of his vigour.

At the Commemoration of his Centenary Anniversary, at Selborne on June 24th, 1893, several considered the view that Gilbert White belonged to Hants and Sussex conjointly as visionary and untenable. But in view of the facts above stated, what must be the verdict? Was Gilbert White a Sussex naturalist or not?

ORNITHOLOGICAL NOTES FROM LEICESTERSHIRE.

By F. B. WHITLOCK.

THE following notes are the result of frequent visits to the neighbourhood of Loughborough during the last two or three years. They do not pretend to be of any special interest, but, as field-naturalists are few and far between in the north of the county, they may be worth recording.

1890.

Hawfinches were not uncommon during the breeding season; several nests were found in one small wood. In previous years,

this species, though breeding regularly, had always been scarce. A Wood Warbler's nest was found May 23rd, and two Grasshopper Warblers a little earlier. Moss had been used in the construction of both the latter nests.

In a boat-house by the Soar quite a colony of Swallows had established themselves. On June 15th several nests contained eggs. To gain access, the old birds had to fly in through a hole where a couple of bricks had been dislodged. The owner, to discourage the birds, on account of the dirt they made, wired the hole over, but the birds beat him by skimming under the door.

On Aug. 16th and 17th, noticed a few Common Sandpipers flying by the Soar, and in the morning flocks of Lapwings came from other parts to feed in a favourite meadow.

Sept. 17th. A few Chiffchaffs in the willows by the river; they were uttering their customary notes, but in a very feeble manner, as though they were young birds practising. Also noticed many Missel Thrushes. These birds are very fond of black currants. An island in the Soar, which is planted as an orchard, is visited incessantly when the fruit is ripe. They soon clear a bush.

Oct. 26th. A great many flocks of migratory Thrushes passing to south-west, including Fieldfares, Redwings, and Song Thrushes; a few flocks of Starlings at the same time. Wind strong E. An occasional Hooded Crow or two also seen, and Goldcrests observed in the hedgerows. On the following day a flight of Woodcock arrived.

Nov. 29th. A friend sent me a Water Rail that he had shot, and reported that a large flock of Golden Plovers had passed up the Soar Valley during the week. A good many Snipe were about at this time.

Dec. 2. A few Bramblings were caught by local birdcatchers.

At Christmas the weather was very severe, the ice on the Soar being several inches thick, but a small sheltered dyke near at hand was unfrozen. This was haunted by Moorhens, Water Rails, Common Snipe, and Grey Wagtails, all of which were in very poor condition; indeed, the Moorhens were so benumbed with cold that a fox-terrier caught several by running them into a hedge-bottom. A Common Snipe got up literally from under my feet as I stood talking to a friend on a small culvert. We had been there a minute or two in conversation before it rose. On the ice

were tracks of Little Grebes in the half-melted snow, which had frozen again. The impressions were wonderfully clear, giving one a good idea of the awkwardness of this species in walking. A few days later a flock of thirteen Wild Geese were seen, but the species was not recognised.

1891.

The break up of the frost on 22nd Jan. was followed by a flood, on which numbers of Little Grebes were swimming. Where did they come from? On Jan. 25th the first Lapwings appeared since the hard weather commenced. On Feb. 16th got a glimpse of a small Finch which I believe was a Siskin. On March 29th several pairs of Magpies were building their nests, and in a tall elm was a partially constructed Crow's nest, which I was told was the work of a pair of Hoodies. Whilst I was watching it from a distance, a pair of these birds flew into the tree. However, nothing came of the nest, as both birds disappeared shortly afterwards.

March 25th. A Great Crested Grebe caught in the outwoods, Charnwood Forest. A stream flows through the northern end of the wood, which carries off the surplus water from the adjacent reservoir. I think this bird must have first appeared on the reservoir, and then followed the stream into the wood, where it was captured. A second example was shot near Barrow-on-Soar about April 20th.

April 30th. The first Swifts and Corn Crakes were seen and heard to-day.

May 2nd. Four or five Common Sandpipers, on migration. Tree Pipits had arrived in large numbers; they were in little parties of five or six; not many were singing. The Hirundines were late this season, except a few stragglers. On May 10th large numbers were flying over the Soar; it snowed heavily on 16th.

May 21st. Examined a Nightingale's nest in an old osier-stump covered with ivy. Owing to the tenant of the osier-bed taking a too paternal interest in this nest, the old birds forsook it after laying four eggs; they, however, hatched a second clutch in a nest placed in a similar situation, but the latter nest was quite exposed to view. I heard that a few Wheatears had appeared on migration about a month previously.

May 28th. An old male Kestrel was shot on the outskirts of

Loughborough; it had been attacking the Sand Martins flying over a brick-yard pond; it had an old wound on the tarsus.

June 6th. A lot of water out in the Soar Valley. To reach my old hunting ground, had to wade half a mile. Found a Sky Lark's egg on the top of a mole-hill.

June 18th. Young Lesser Whitethroats pretty common in a large garden. Turtle Doves in fair numbers in the wooded districts.

Aug. 27th. A few Hawfinches about the allotment gardens by the Leicester Canal.

Sept. 2nd. Three Hawks came out of a wood; one, a very small one, either a Merlin or a Hobby, probably the latter.

Sept 19th. Two adult Herring Gulls flying low over the streets of Loughborough. A young Great Crested Grebe shot on the Soar on the 18th, and a Common Tern on the 19th.

Nov. 8th. A few Snipe, Hooded Crows, and Lesser Redpolls about.

Nov. 12th. A Water Rail picked up under the telegraph-wires. The finder named it an "Osier-piper."

Dec. 26th. Wood Pigeons very numerous in Walton Holm. Residents in the district say that these birds come down from the Charnwood Hills every winter; they certainly are more numerous at that season than at any other time.

1892.

Jan. 10th. A friend shot a female Sparrowhawk; soon after he fired, the male appeared in a neighbouring spinney, calling continually. Loth to kill him, my friend eventually had to drive him away with snowballs. A few Mallards visited the river at dusk. Five Wigeons were seen a day or two previously.

March 27th. Heard several Curlews in the wet meadows by the Soar, near Barrow; also a few Hooded Crows. In the leafless hedges Chiffchaffs were not uncommon. It snowed heavily in the afternoon. Flushed a pair of Teal, and saw about twenty ducks that looked like Wigeon.

During April a few flocks of mature Black-headed Gulls passed down the Soar. I examined an example killed in a muddy ploughed field.

April 17th. Saw the first Redstart; a Red-backed Shrike also was heard, in an uncultivated osier-bed.

May 7th. A Magpie's nest contained young, as did a second near at hand. Close to it was a Kestrel incubating five eggs. I also found a Blackbird's nest on the bare ground in the same wood. The eggs were as small as those of the Redwing. I had noticed another nest containing one egg the evening before; I fully expected a second would be laid the following morning, but it was not till 11 o'clock that this was accomplished. Two Little Grebes were building in a backwater of the river, and several pairs of Marsh Tits were about; they were very animated, the males chasing the females, and uttering rippling notes which were quite musical. As schoolboys we always called this species the "Chica-dee-dee," from its call-note.

May 29th. Observed a nest of the Lesser Redpoll in a half-wild garden. It was placed in the upper branches of a dead sloe-bush. There was not the slightest attempt at concealment. The nest contained five eggs. A day or two later I received a Willow Wren from the same locality. It had been strangled by a horse-hair, which a Lesser Whitethroat had left hanging near its nest.

June 26th. A great many Corn Crakes were calling in the low-lying meadows near the Soar.

July 24th. A few young Kestrels about. On one occasion three were observed on the flat roof of a summer-house. They had been feeding on small birds. When rowing on the river we disturbed a brood of young Wild Ducks. The little ones scuttled off into the reeds, but the old duck laid her head and neck flat on the surface of the water, at only an oar's length from the boat. She remained quite still until the last young one had disappeared. A Barn Owl seen flying by the wood side.

Aug. 24th. Thundery weather in the early morning. At about 5 a.m. a large number of Swallows passed over towards the east at a great elevation.

Sept. 1st. A small plover, which I believe was a Dotterel, was in company with a large flock of Lapwings, feeding in a meadow. Owing to the shyness of the latter birds I could not make identity certain.

Sept. 3rd. Ringed Plovers passing over to S.W. at a great height. Wind strong W. A few young Wheatears also seen.

1893.

Feb. 26th. Some gulls seen in the distance, Kittiwakes or Black-headed, probably.

March 24th. Four Black-headed Gulls seen and a Redshank, 25th.

April 2nd. Observed a pair of Tree Sparrows on the island. These birds breed every year in a small overflow pipe.

April 23rd. In certain parts of Leicestershire the Magpie is still pretty common. In a wood of about ten acres I observed four nests. One in an elm, another in an oak, and two in slender fir-trees. One of the latter was the smallest nest I ever saw. The old bird was incubating, and her tail projected several inches outside. I climbed up to the nest, which contained seven eggs. I had the usual difficulty in reaching one. Magpies not infrequently build in tall hedges, but I never find nests in such situations until the foliage is pretty dense. A Grasshopper Warbler "reeling" at dusk, and also at 9 a.m. A friend reports "Bullfinch's nest with eggs, and the Wood Warbler, Nightingale, and Blackcap heard in full song on 18th."

May 7th. Had a run through the Belvoir Woods. Heard several Nightingales. This species was common during the breeding season in Leicestershire. Coots and Little Grebes were breeding on a pond in the old gravel pit gardens, and close at hand I observed a Great Spotted Woodpecker, which I was told had a nest near. Heard a Wood Warbler near the Kennels. The commonest birds in the Vale of Belvoir are the Yellow Bunting, Whinchat, and Greater Whitethroat. Near Harby the Green Woodpecker is pretty frequent.

June 25th. Noticed many pairs of Turtle Doves. This species has much increased during the last ten years.

July 6th. Observed a fine Barn Owl at dusk, and I think I heard the notes of a Woodcock. At 10.30 p.m. I heard a warbler singing in a densely matted portion of the wood, which I feel certain was a Marsh Warbler. This part of the wood is about one hundred yards from the river, and has been nearly cleared of large timber; willows have been planted and allowed to run wild. Convolvulus and other climbing plants grow there very luxuriantly, making the spot very difficult of examination, I have however found nests of the Reed Warbler, Sedge Warbler, and other common species. The warbler I am referring to was singing something like a Nightingale, but the song was not so sweet, nor so sustained, and the bird frequently altered the tone. Owing to the darkness it was impossible to get very close without

disturbing every bird within fifty yards. I listened again, early the next morning, without success.

July 7th. Observed eight Kestrels on the wing at the same time, also many Ring Doves. Though the Stock Dove breeds on Charnwood Forest, they never seem to come down to the lowlands to feed, and although we have shot numbers of Ring Doves, we have not yet obtained the former species. One morning in the previous autumn some large flocks of doves passed over at a great height. They looked too small for Ringed Doves, and I think they may have been Stock Doves. A young Black-headed Gull shot on the Soar.

Aug. 23rd. Some flocks of Dunlins and Ringed Plovers passed over at a great height to S.W. These birds were too high up to be seen, but I clearly recognised their notes. This was about 5 a.m. A little later a Redshank passed in the opposite direction. In the evening two adult Herring Gulls. The following day twenty-three of the same species observed. These Gulls have been rather common this year in the Trent valley.

I am indebted to Mr. T. B. Cartwright, of Loughborough, for some of these notes, and also to Mr. J. B. von Wiedt. The latter gentleman, I regret to say, died 30th July last. His death is a great loss to Leicestershire field-naturalists.

In May and June, Quails were heard calling, on a farm on the outskirts of Loughborough. There is little doubt that a pair or more nested there.

On August 21st a young Cormorant was caught alive in the gardens at Belvoir Castle, and is still in captivity. It takes from eighteen to twenty small fish daily.

Early in the morning of Sept. 11th Mr. Osborne, of Staplefield, at Irton-sidings picked up a disabled Manx Shearwater. He carried it home and kept it alive for some days, but it refused all food. As there had been no previous gale to blow the bird inland, I think its appearance supports my contention that this species migrates across country. Irton-sidings are exactly on the boundary line between Notts and Derbyshire.

NOTES AND QUERIES.

Zoological Maps.—In Mr. Miller Christy's very useful and suggestive paper on Zoological Maps in the last number of 'The Zoologist' (pp. 401-8), he proposes that those for Birds should have the lines of migration indicated by arrows. I wonder if he is aware that in the 'Birds of Devon' such maps have been actually published by Mr. D'Urban and myself, in which the spring and autumn movements of birds to and from the British Islands (more especially as they relate to Devonshire) are attempted to be in this way illustrated?—MURRAY A. MATHEW (Buckland Dinham, Frome).

MAMMALIA.

European Beavers at the Zoological Gardens.—Specimens of the American Beaver have long been familiar to visitors in the Regent's Park Zoological Gardens; but in Europe this animal has become so rare, or at least so restricted in its haunts, that the capture of one, still less the sight of one in London, was scarcely to be hoped for. The acquisition therefore of an entire family, male, female, and four young, from the Lower Rhone, and their successful transport to London, is a very remarkable event, and one which should attract many a curious naturalist to the Zoological Gardens. As to whether the American and European species of Beaver are identical or not, opinions differ; but it is now generally considered that the difference in the shape and length of the nasal bones is sufficient to justify their specific separation. *Vide antea*, p. 314.—ED.

Albino Squirrel.—In 'The Zoologist' for November (p. 426), I reported the occurrence of an albino Squirrel, which was shot at Westonbirt, near Tetbury, on Sept. 11th. Strange to say, another was killed in the same wood about a fortnight later, namely, on October 2nd, and was sent to me for preservation. It proved to be a female, and, like the male previously obtained, was a pure albino.—H. W. MARSDEN (Bath).

[It is a pity that they could not have been both taken alive, instead of being shot, for it would have been interesting to have paired them in a good roomy cage with a tree in it, and have waited to ascertain whether their progeny, if any, would be also white. Possibly they may have been of the same litter.—ED.]

Natterer's Bat in South Lancashire.—Mr. Joseph Chappell has in his collection an example of this species, which was captured in a foundry at Cheetham Hill, Manchester, last Christmas time. The size, pointed tragus, and lash of hairs at the margin of the interfemoral membrane are perhaps sufficient to establish the identification of the species.—CHAS. OLDHAM (Ashton-on-Mersey).

Serotine in Sussex.—On October 5th I obtained two specimens, male and female, of the Serotine, *Vesperugo serotinus*. They were taken in the old roof of our parish church at Arundel, now under repair, and were extremely fat. On the 6th I had another male, killed some four miles away, also very fat. The Great Bat, *V. noctula*, is very common here. The specimens of *V. serotinus* I have are of a greyish brown colour, and the hair very long and silky.—W. B. ELLIS (Arundel).

BIRDS.

Food of the Eider.—An Eider Duck examined on October 26th had in its gullet a Great Spider-crab, *Hyas araneus*, with a carapace, unbroken, of two inches and a quarter long. This is the second large crab I have taken out of an Eider, and on another occasion several cockles and a periwinkle, showing what large crustaceans and mollusks they eat, but probably never fish.—J. H. GURNEY (Keswick Hall, Norwich).

Black Tern in South Lancashire.—On November 3rd I saw a Black Tern, in immature plumage, which was picked up beneath the telegraph-wires, on the railway line between Stretford and Old Trafford, about the middle of September last. (At p. 436, sixth line from bottom, for "Rhos-treigir," read "Rhos Neigir.")—CHAS. OLDHAM (Ashton-on-Mersey).

Woodchat in Worcestershire.—On the 14th May last I saw a Woodchat, *Lanius pomeranus*, on a holly-bush at Weatheroak Hill, Alvechurch, Worcestershire. It was at first remarkably tame, allowing me to scan it carefully, and flew to the top of a tall ash tree; where it perched on a dead twig. It looked down at me inquisitively, showing clearly its beautiful chestnut neck. On being again disturbed, it flew away, uttering a loud metallic note like "clank, clank, clank," and I then remarked that it was accompanied by a mate. I searched the district many times afterwards without again seeing either of the pair, but they were reported from King's Norton and King's Heath. From the descriptions given, there is no doubt that they were the same pair.—F. COBURN (Holloway Road, Birmingham).

Female Merganser assuming Male plumage.—On the 7th March last I received, from County Galway, a Merganser, *Mergus serrator*, which I at first mistook for a young male assuming adult plumage, but upon dissection I was surprised to find that it was an adult female, and from the condition of the ovary I think a very old, barren bird. Mr. H. E. Dresser, who has examined the bird, writes:—"The Merganser is a very interesting specimen, and is, I should say, an old female partially assuming male plumage. It is the first one in that stage of plumage I have seen."—F. COBURN (Holloway Head, Birmingham).

Curious nesting-place of Pied Wagtail.—In May last a Pied Wagtail built her nest in the top of a potato in a field near here. At that time the

tops were very small, and the nest could be seen at a good distance. It was placed on the top of a ridge, and well out into the field.—J. WHITAKER (Rainworth, Notts).

Nesting of the Spotted Flycatcher.—One of these birds built her nest last spring in a small piece of gorse by the side of a plantation in the deer park here. It was placed in the centre of the branch, and was a perfect nest in every way. I have never seen one before which has not had one side against a wall or trunk of a tree. Mr. Cordeaux saw this nest, also Mr. Young, both of whom remarked they had never seen a nest of this species in such a position before. In due course eggs were laid and the young hatched.—J. WHITAKER (Rainworth, Notts).

Baillon's Crake near Nottingham.—I saw one of these birds in Stanley's shop in Trent Street, Nottingham, and was informed that it had been picked up by a man near Gedling station. It was then dead and lying on the road under the telegraph-wires, against which it had evidently flown and killed itself. The date was June 22nd. This is only the second known occurrence of this species in Notts, and I was fortunately able to secure it for my collection of local birds.—J. WHITAKER (Rainworth, Notts).

Sabine's Gull on the N.W. Coast of England.—In confirmation of the Rev. H. A. Macpherson's note (p. 429), I may state that two specimens of this Gull were shot this autumn in or near Morecambe Bay. On October 11th I received a note from a friend residing near Morecambe to the effect that he had obtained a very small Gull which he believed to be "Sabine's," and asking me if I would tell him the distinguishing characteristics of this species. I supplied him with the required information, and on October 24th he wrote again, saying that he had forwarded a Gull similar to the one he had previously procured to my taxidermist. This bird I have since seen, and it is undoubtedly an immature example of *Xema sabinii*.—T. H. NELSON (Redcar).

Night Heron near Belfast.—I have recently had the pleasure of examining, in the flesh, a Night Heron, *Nycticorax griseus*, which was shot on the evening of the 26th October, on a piece of waste land just outside Belfast, known as the "People's Park." In the moonlight the gentleman who shot it mistook it for an owl by its flight, which he describes as slow and lazy. It is a young bird in the spotted plumage; sex not ascertained. To Ireland the Night Heron is a very rare visitor, not more than ten or twelve instances of its occurrence being known.—ROBERT PATTERSON (Malone Park, Belfast).

Sabine's Snipe in Co. Donegal.—On Sept. 28th Mr. R. W. Peebles, of Dublin, shot a very dark specimen of this variety on the mountains near Bonny Glen, Moer, Co. Donegal. This is the same specimen that is

mentioned erroneously in the current number of the 'Irish Naturalist' as having been obtained in Co. Tyrone. It has been preserved by Williams, of Dame St., Dublin.—H. C. HART (Carrablagh, Portsalon, Letterkenny).

Long-tailed Duck in Sussex.—Two Long-tailed Ducks, *Harelda glacialis*, an adult pair, were shot in October near Rye Harbour, Sussex, the female by Capt. Taylor on the 20th, and the male on the 23rd by a fisherman named Sutherden. The tail-feathers of the male were $7\frac{1}{2}$ inches long. Both birds are in the hands of Mr. Bristow, of St. Leonards, for preservation.—GEORGE W. BRADSHAW (Hastings).

The Birds of Pembrokeshire.—Being engaged in preparing a book on the Pembrokeshire birds, which will be published in the course of next spring, I shall be very grateful for any notes relating to the birds of that county, or to those of South Wales in general.—MURRAY A. MATHEW (Buckland Dinham, Frome).

REPTILES.

Adders useful in destroying Voles.—A question which, *inter alia*, came before the Vole Committee last summer was the extent to which Adders might be set down as Vole destroyers, and in their subsequently issued Report it was stated that "Adders feed readily on Voles, but an Adder would probably not kill more than one animal of the size of a Vole in a single day, so there is no reason to extend protection to those venomous reptiles." I have killed Adders frequently that had more than one Vole or Mouse inside. I once killed one with three Voles all swallowed probably within one hour previously. Not long since I was talking to an extensive sheep farmer who had killed every Adder he met with, until one day during the height of the Vole plague he killed one that had just swallowed no less than five Voles, so that the Committee has not given the Adder quite so much credit as it is entitled to. Sheep are often killed if bitten in spring upon the under jaw owing to the rapid swelling that supervenes, and dogs, as everyone knows, are often seriously and sometimes fatally bitten. It is no rare occurrence to hear of bites on human beings, but, so far as I can remember, only one death—that of a rather delicate child—has happened hereabouts in recent years. Protection for these venomous reptiles is, of course, out of the question; but at any rate the good they are able to do in destroying Field Voles should not be overlooked. There is nothing more amusing than the assertions sometimes made—and made in all good faith—as to the length the Adder will grow. The largest one I have yet seen, and it is in my own collection, is exactly $24\frac{1}{2}$ inches in length.—ROBERT SERVICE (Maxwelltown, Dumfries).

ERRATUM.—P. 143, l. 6, for "*former*," read "*fumes*."

SCIENTIFIC SOCIETIES.

LINNEAN SOCIETY OF LONDON.

November 2, 1893.—Professor STEWART, President, in the chair.

Messrs. W. G. Axford and C. W. Nicholls were admitted Fellows, and Mr. H. M. Bernard was elected.

The Secretary having read a list of the donations to the Library since the last meeting, the President moved that the thanks of the Society be given to the donors, and to Lady Arthur Russell, for the valuable collection of engraved portraits of naturalists which she had been so good as to present to the Society in the name of her husband the late Lord Arthur Russell, a motion which was passed unanimously.

The President then referred to the improvement which had been carried out during the recess in the Society's apartments by the introduction of the electric light, for which they were indebted to the liberality of the Treasurer, Mr. Crisp, who on former occasions had shown himself so generous a benefactor, and moved that the hearty thanks of the Society be given to Mr. Crisp for his munificent present. The resolution was carried by acclamation.

Referring to the deaths of Fellows of the Society which had occurred since the last meeting, the President alluded especially to the Rev. Leonard Blomefield, whose connection with the Society, extending over seventy years, had recently been made the subject of a congratulatory address (see p. 418); to Mr. F. Pascoe, the distinguished entomologist, and to Mr. George Brook, whose lamented decease had caused the vacancy in the Council which they now had to fill.

The ballot having then gone round for the election of a new Councillor in the place of Mr. George Brook, deceased, Mr. Henry Seebohm was declared to have been elected.

Mr. George Murray exhibited and made remarks on a series of seaweeds mounted on lantern-slides, some of which were new to Great Britain. He also showed some specially prepared tins, which were recommended for collecting purposes, but which, in the opinion of some present, would be likely to become speedily useless from corrosion.

Mr. Holmes showed some new British Marine Algæ, and made remarks on their affinities.

Dr. Prior exhibited the fully-developed fruit of *Pyrus japonica* from Rogate, Sussex, seldom seen, although the plant is common enough, and alluded to its use as a conserve, if it could be obtained in sufficient quantity.

Mr. Spencer Moore read a paper on the phanerogamic botany of an expedition to Mato Grosso, upon which he acted as botanist. Starting from Cuyaba, the expedition first visited the Chapada Plateau to the east

of that city, where many plants were collected. Thence a journey was made to the new settlement of Santa Cruz on the Paraguay, about half-way between Villa Maria and Diamantino. The flora here is of a mixed character, nearly 37 per cent. of the plants being common to tropical South America, upwards of 27 per cent. occurring in the N. Brazil Guiana Province of Engler, with 20·5 per cent. common to that province and the S. Brazilian, and only 13 per cent. of S. Brazilian types. From Santa Cruz a party penetrated through the primeval forest lying to the north, and reached the Serra de Sapirapuan. The forest flora is markedly Amazonian in character, nearly 50 per cent. of the plants being natives of Amazonia or of the neighbouring countries within the N. Brazil Guiana province or related thereto, while the proportion of species common to tropical America falls to rather more than 28 per cent., the South Brazilian element being present only to the extent of 9·5 per cent. Returning to Santa Cruz, the Rio Braciato was partly explored, and the Paraguay ascended to the neighbourhood of Diamantino. The party then came down the Paraguay to the Corumba, where many plants of interest were found. The expedition was partly disbanded at Asuncion. Among the Amazonian plants found at Santa Cruz or in the forest may be mentioned, *Randia ruiziana*, *Bertiera guianensis*, the Loranthad, *Oryctanthus ruficaulis*, *Catleya superba*, *Epidendrum imatophyllum*, *Rodriguezia secunda*, &c. The collections comprise close upon 700 species, of which rather more than 200 were considered to be new, and there are eight new genera. The southward extension of the Amazonian flora to a latitude well within the Paraguay river system was regarded as a noteworthy feature.

On behalf of Mr. G. M. Thomson, of Dunedin, N.Z., Mr. W. Percy Sladen read a paper on a new freshwater Schizopod from Tasmania, illustrating his remarks with graphic sketches on the black-board to indicate its affinities and differences.

ZOOLOGICAL SOCIETY OF LONDON.

Nov. 7, 1893.—Sir W. H. FLOWER, K.C.B., President, in the chair.

The Secretary read a report on the additions that had been made to the Society's Menagerie during the months of June, July, August, and September. Among these special attention was called to four South-Island Robins, *Mira albifrons*, from New Zealand, presented by Capt. Edgar J. Evans; an adult male of Stairs' Monkey, *Cercopithecus stairsi*, presented by Mr. F. Hintze on June 7th; a family of six European Beavers, *Castor fiber*, consisting of a male, a female, and four young ones, from the Lower Rhone; a young Corean Sea Eagle, *Haliaëtus branickii*, obtained from Corea; a specimen of the Great Grebe of Antarctic America, *Aechmophorus major*, figured in 'The Field' of November 18th; and a living

example of the Goliath Beetle, *Goliathus druryi*, from Acera, the largest of known Coleoptera, also figured in 'The Field' of October 21st.

Mr. Schlater read some notes on the most interesting animals he had recently seen at the Zoological Gardens of Stuttgart, Frankfort, and Cologne.

An extract was read from a letter addressed to the Secretary by Mr. J. G. Millais, relating his endeavours to obtain specimens of the White Rhinoceros, *Rhinoceros simus*, in Mashunaland.

A communication was read from Babu Ram Bramha Sányál, describing a Hybrid Monkey of the genus *Semnopithecus*, born in the Zoological Gardens, Calcutta.

Mr. Tegetmeier exhibited a hybrid between Black Grouse and Red Grouse, shot at Balmannock, Kirkcowan, N.B.

Mr. Boulenger read a paper "On a Nothosaurian Reptile from the Trias of Lombardy, apparently referable to *Lariosaurus*." His description was based on a small, nearly perfect, specimen from Mount Perledo, showing the ventral aspect, belonging to the Senckenberg Museum in Frankfort-on-Main, which had been intrusted to him by the Directors of that institution, and was exhibited before the meeting. He pointed out the presence of a series of minute teeth on the pterygoid bones, and an entepicondylar (ulnar) foramen in the humerus. The number of phalanges was 2, 3, 4, 4, 3 in the manus, and 2, 3, 4, 5, 4 in the pes; the terminal phalanx was flattened and obtusely pointed, not claw-shaped. In discussing the affinities of this reptile the author stated that the *Lariosaurus* described by Diecke did not appear to be generically distinguishable from the *Neusticosaurus* of Seeley, which he referred to the *Lariosauridae*, regarding that family as intermediate between the *Mesosauridae* and the *Nothosauridae*, though nearer the latter. The *Mesosauridae*, in his opinion, formed one suborder, the *Lariosauridae* and *Nothosauridae* together a second suborder, of the order *Plesiosaurus*.

Dr. A. Günther read a second report on specimens of Reptiles, Batrachians, and Fishes transmitted by Mr. H. H. Johnston, C.B., from British Central Africa. Dr. Günther also read descriptions of some new Reptiles and Fishes of which specimens had been obtained on Lake Tanganyika by Mr. C. E. Coode-Hore.

Mr. Edgar A. Smith gave an account of a collection of Land and Freshwater Shells transmitted by Mr. H. H. Johnston from British Central Africa. The specimens in this collection, obtained by Mr. R. Crawshay from Lake Mweru, were almost all new to science. He also read descriptions of two new species of shells of the genus *Ennea*.

A communication was read from Dr. A. G. Butler, containing an account of two collections of Lepidoptera sent by Mr. H. H. Johnston from British Central Africa.

A communication was read from Mr. Edwyn C. Reed, containing a list of the Chilian Hymenoptera of the family *Odyneridae*, with descriptions of some new species.

A communication from Prof. Newton contained the description of a new species of bird of the genus *Drepanis*, discovered by Mr. R. C. L. Perkins in the island of Molokai, Sandwich Islands.—P. L. SCLATER, *Secretary*.

ENTOMOLOGICAL SOCIETY OF LONDON.

November 8, 1893. — HENRY JOHN ELWES, Esq., F.L.S., F.Z.S., President, in the chair.

Messrs. H. J. Turner, F. W. Urich, and J. C. Webb were elected Fellows.

Mr. F. Merrifield exhibited some low-temperature forms of *Vanessa atalanta*, artificially produced, which showed a great reduction in the area of the scarlet bands on the wings, and a great increase in the area of the white and bluish markings.

Professor E. B. Poulton described and illustrated, by means of a map, a simple method for showing the geographical distribution of insects in collections. Below the name-label of the genus, and of each species, were placed coloured slips of such a size as to be distinctly visible at a distance, and the colours, with one exception, corresponded with those made use of in the map at the beginning of vol. i. of Dr. A. R. Wallace's 'Geographical Distribution of Animals.' The exception referred to was the Palæarctic Region, which was coloured blue, instead of pale brown as in the original. Framed maps of the same kind, and coloured in the same way as the one he exhibited, were to be placed in museums, so as to be readily seen from various groups of cabinets. In these maps the names of the Regions, and numbers of the Sub-regions, were distinctly printed, so that they could be read at a considerable distance. Prof. Poulton added that the method he had described was being gradually introduced into the Hope Collections at Oxford. Mr. McLachlan stated that a somewhat similar plan had been adopted in the Brussels Museum by M. Preudhomme de Borre.

Dr. Sharp read and criticised an extract from Livingstone's 'Expedition to the Zambesi, on the habits of a small fighting Ant.

Prof. Poulton read a paper "On the sexes of larvæ emerging from the successively laid eggs of *Smerinthus populi*," and Mr. Merrifield, Dr. Sharp, and the President took part in the discussion which ensued.

Mr. W. L. Distant communicated a paper entitled "On the Homopterous genus *Pyrops*, with descriptions of two new species."

The President read a paper, by himself and Mr. J. Edwards, entitled "A revision of the genus *Eneis*," which he characterized as the most cold-loving genus of butterflies. He also exhibited his complete collection of species of this genus, which was said to be the finest in the world.—H. Goss, *Hon. Secretary*.

NOTICES OF NEW BOOKS.

A Dictionary of Birds. By ALFRED NEWTON. Assisted by HANS GADOW, with Contributions from Richard Lydekker, Charles Roy and R. W. Shufeldt. Parts I and II. 8vo. London : A. & C. Black, 1893.

ALTHOUGH ninety years have elapsed since the appearance of Montagu's '*Ornithological Dictionary*,' its general utility, even at the present day, has never been questioned; and considering the increased attention which of late years has been paid to systematic ornithology, it is somewhat surprising that until the present year no one has been found both able and willing to undertake a new *Dictionary of Birds* brought up to a level with the present knowledge of the subject. Were such a *Dictionary* confined merely to British Birds, as was the case with Colonel Montagu's work, it would still be a very arduous undertaking, and we should be extremely grateful for it. But Professor Newton, in the volume before us, has not only attempted this, but a good deal more; for he has not only extended his *Dictionary* to include Exotic species, but has introduced a variety of articles on anatomy, colour, digestive system, eggs, embryology, extermination, feathers, geographical distribution, migration, &c., which make the work a veritable encyclopædia of ornithology.

In the main his volume appears to be founded upon the excellent articles which, in conjunction with the late Professor W. K. Parker and others, he contributed to the 9th and latest edition of the '*Encyclopædia Britannica*'; but these have been largely augmented and supplemented by other articles which go to make the series much more complete and useful. A more valuable repertory of the kind has not hitherto appeared; and when the two parts which are still wanting to complete it are to hand, ornithologists will possess a work of reference of exceptional utility.

We cannot go so far as to say that it is as complete as it might be made, or that it is not likely to be improved upon in subsequent editions; for we have noted many omissions of words that we should certainly have expected to find, and would take exception to the introduction of others which, if not

altogether unnecessary, might at all events have given place to some which in our humble opinion are of more importance.

In saying this we make all due allowance for the difficulty of the undertaking. The literature of the subject is so vast, and the sources of information from which key-words may be collected so many and various, that we do not think it would be possible for any author, even with the valuable assistance of such coadjutors as Professor Newton has secured, to embody in a first edition all that goes to make such a work perfect. Indeed, we do not hesitate to say that when the concluding portion of the Dictionary has appeared, the author will be amongst the first to note the improvements which might have been made had the whole been before him in type before sending any portion to press. Herein, perhaps, lies the chief difficulty in attaining perfection; for we have to bear in mind that it is practically the first attempt of the kind that has been made in this or any other country. Having said thus much, we trust that we shall not be deemed hypercritical if we venture to point out a few of the shortcomings which have presented themselves to our notice on looking over the first two parts of the work as issued, and offer a few suggestions which may be useful in the preparation of a second edition which we make no doubt will be called for at no distant date.

To deal first with omissions. We should certainly have expected to find such names as the following:—"Attagen" (Zool. 1884, p. 31); "Beccafico" (Willughby, pp. 216, 227; Jesse, iii. p. 78); "Berkut" (upon which a long article has been written touching its identity ('The Field,' December 27th, 1890); "Coistrel" (Shakespeare, see Kestrel), "Cur" or "Curre," a provincial name for different kinds of diving ducks* (Burton. Anat. i. 96, and Hawker's 'Instructions,' p. 414); "Civetta," the Italian Little Owl, imported by Waterton and liberated in Yorkshire ('Essays,' ii. p. 15; Savi, 'Ornitologia Toscana,' i. p. 76); "Clod-bird," or Clot-bird (Muffet, 'Health's Improvement,' p. 109, and Latham's 'Falconry,' Bk. ii. p. 144). "Cob and Pen": some information on the origin of these names

* It is to be observed that the editor of the recently published 'Diary of Col. Hawker' restricts this name to the Scaup, vol. ii. pp. 361, 364-66, 369-70, 372, &c. But see this author's 'Instructions to Young Sportsmen,' p. 414, ed. 1859.

applied to the male and female Swan would be of interest, and we trust it may yet be supplied under "Pen." "Culver," the old English name for pigeon, used by Chaucer and Spenser, A.S. *culfre*, is not mentioned. "Cushat" is given, though not the etymology, A.S. *cusccote*, a wild pigeon. Ray (1691), quoting Nicholson's 'Glossarium,' gives "*Cowshot* palumbus." "Bullfinch" of course is given, but not "Bullspink," a Yorkshire name for the Chaffinch; "Coppersmith" is given, but not "Copper-finch," by which name the Chaffinch is known in Cornwall. Nor do we find "Colly," a Blackbird in Somersetshire; "Cuddy," Hedgesparrow, and Moorhen (Montagu); "Curwillet," Sanderling, "Crew," and "Cockathodon," names for the Manx Shearwater in Scilly; "Clinker," the Avocet in Norfolk; "Curlew-knave," the Whimbrel in Cumberland (*cf.* Household Book of Lord William Howard of Naworth, 1612—1640); "Eyess," "Gladdie," the Yellowhammer in Cornwall; "Guttercock," the Water Rail in Cornwall; "Gosshatch," the female and young of the Wheatear in Leicestershire (Evans); and "Haggard," a hawk taken after it has moulted in a wild state. To the name "Horn-pie" for the Lapwing might have been added (p. 437) "Hornywink," in use in Cornwall. "Heath-cock" and "Heath-hen" are given, but not "Heath-throistle." "I find," says Dr. Lister, "that the Ring Ouzel is so called with us in Craven, where there is everywhere in the moores plenty of them."—Dr. Lister to John Ray, York, July 2, 1676. (See Derham's Letters of Ray, 1718, p. 140.) The name "Hoop" applied to the Bullfinch in Cornwall might have been given. It is stated (p. 44) that "Blood-olph" is a not uncommon local name for this bird; but we have never met with it, although we have been in almost every county in England. "Judcock" and "Jetcock" for the Jack Snipe have perhaps been omitted accidentally, for these are much commoner names than the last mentioned.

These examples of "missing words" are those which have occurred to us offhand on looking through the Dictionary from A to J. The author will doubtless shelter himself behind the opening lines of his Prefatory Note, wherein he expressly remarks:—"Those who may look into this book are warned that they will not find a complete treatise on Ornithology, any more than an attempt to include in it all the names under which Birds, even

the commonest, are known. Granted that a complete treatise is not to be expected in a Dictionary, we cannot concede that a Dictionary is not to be as perfect as its author can make it, and no one who has referred to Professor Newton's articles in the 'Encyclopædia Britannica' will doubt for a moment his ability to supply many additions and improvements. It is to be regretted that he has not seen his way to this. The increased bulk and cost of each Part which would be thereby necessitated, would, we opine, be quite immaterial to readers who have felt the want of such a work.

As regards what we have ventured to call "improvements," we allude to the desirability of finding more references to other sources of information outside the Dictionary, and which after all is one mode of economising space. To take the word *Abadavine* on the very first page. We read "ABADAVINE or ABERDUVINE (etymology and spelling doubtful); a name applied in 1735 by Albin (Suppl. Nat. Hist B. p. 71) to the Siskin, but perhaps hardly ever in use, though often quoted as if it were." Here we miss the more familiar spelling *Aberdavine* and *Aberdevine*; and it would have been of interest to add that this name, though not mentioned by Willughby, is used by Gilbert White in his eighth letter to Daines Barrington, and by Montagu in a letter to White, May 21st, 1789. Again, we find "BARLEY-BIRD, a name given in some parts to the Yellow Wagtail, in others to the Wryneck; but in both cases from their appearing at the time of barley sowing. By some authors it is said, but obviously in error, to be applied to the Siskin." But see Willughby, Orn. p. 261. The Yellow Wagtail and the Wryneck do not usually arrive until about the 7th of April, while barley is generally sown in February and March.

To the statement (p. 78) that "Carr-goose is an old name for the Great Crested Grebe" might be added "and is still used in Staffordshire (Garner)." *Apropos* of Grebe (p. 381), the suggestion that this is from the French *Grèbe* is, we venture to think, doubtful. The bird is said to derive its name from its crest, Cornish and Welsh *crib* and *criban*, a comb, or crest (Skeat). As for its provincial name "Gaunt" (p. 310), which Prof. Newton considers may be "possibly corrupted from Gannet," he might have referred to a note on this subject (Zool. 1884, p. 350), in which a very different and plausible explanation is suggested.

We cannot always agree with Prof. Newton in his suggested etymologies. Take the word "Daker-hen," for example, a provincial name for the ~~Corncrake or Landrail~~.^{*} He will have it (p. 131) that it refers to the unsteady flight of the bird—though it is no more unsteady than that of the Moorhen, Water-rail, Spotted Crake, and other short-winged ralline forms—for he says "to dacker" (Frisian *dakkern*, M. Dutch *daeckeren*) is in use in Lincolnshire, and signifies to stagger, totter, or hesitate. But surely "daker-hen" is merely "t'acre-hen," the north country pronunciation of "the acre hen," cognate with the Scandinavian *ager hōna*, that is "field-hen." See 'The Zoologist,' 1883, p. 229.

When noticing the supposed derivation of the name Bustard (p. 62), reference might have been made to the statement of Dr. Muffett that these birds are

"So called for their slow pace and heavy flying, or as the Scots term them, *gusetards*,[†] that is to say, slow geese." He adds the interesting remark that "in the summer, towards the ripening of corn, I have seen half a dozen of them lie in a wheatfield fattening themselves (as a deer will doe) with ease and eating, whereupon they grow sometimes to such a bigness, that one of them weigheth almost fourteen pound."—'Health's Improvement,' 4to, 1655, p. 91.

Dr. Muffett, whose book was published long after his death, which took place in 1590, was a pensioner of the Earl of Wilton, and lived at Bulbridge in Wiltshire. This curious testimony to the abundance of the Bustard in Wilts in the time of Elizabeth, has been generally overlooked by writers on British Birds, even by the author of 'The Birds of Wiltshire,' wherein, nevertheless, an excellent account of this species is given. *Apropos* of Bustards, it may be noted that the statement (p. 65) to the effect that Macqueen's Bustard "has occurred once even in England," now requires modification, since a second example has recently been procured on the Yorkshire coast (Zool. 1893, p. 21), though probably this had not been recorded at the time the article "Bustard" in this Dictionary' had been passed for press. We note it in view of a forthcoming second edition.

^{*} It is to be found mentioned in Merrett's 'Pinax,' 1667, where it is quoted as a Northumbrian name (p. 183).

[†] So called by Hector Boece in 1527, and Bishop Leslie in 1578.

"Galley-bird," we are told (p. 299), is "given as a Sussex name for a Woodpecker by Mr. Charles Swainson (Prov. Names Br. B. pp. 99, 100), but not mentioned as such by Mr. Borrer, or Mr. Knox." Upon this we may remark that in Sussex, as well as in Kent, the names "Galley-bird" and "Gallows-bird" are applied to the Green Woodpecker, and are noted for that species in Parish's 'Dictionary of the Sussex Dialect.'

Apropos of the Woodpeckers, and the note on "French Pie" (p. 292), it may be observed that Mr. Borrer, in his 'Birds of Sussex,' writing of the Greater Spotted Woodpecker, says, "I am not aware that it has any local name;" but in both Sussex and Hampshire we have heard gamekeepers and beaters call it "French Magpie," a name by which it is also known in Devonshire. and Staffordshire (Garner), though in other counties this name is bestowed upon the Grey Shrike, the *Pie grièche* of the French (Zool. 1893, p. 311). Izaak Walton, in enumeration of the birds used by the falconer, *Auceps*, mentions the French Pie, which in his case, of course, was the Grey Shrike, employed by falconers as a sentinel (*excubitor*) to give warning of the approach of a wild hawk. The mode employed is referred to (p. 66) under the head of "Butcher-bird," as being "well described by Hoy" (Mag. Nat. Hist. iv. p. 342); but for accuracy of description with illustrations, and fulness of detail, we venture to assert that this account is not to be compared with that given in 'The Field' of March 16th, 1878, and reprinted in 'Essays on Sport and Natural History,' 1883 (pp. 117-128). Similarly, under the heading "Cormorant," we are referred (p. 106, note) to "Capt. Salvin's chapter on 'Fishing with Cormorants,' appended to his and Mr. Freeman's 'Falconry' (London, 1859)." But on this subject also a very much fuller account, and more complete because embodying a history of the introduction of this sport into England, is to be found in the same volume of 'Essays' just referred to, an account which Capt. Salvin himself has characterised in 'The Field' as "a very complete history and exact description of the sport." These 'Essays' are only alluded to here for the purpose of showing that the author of the 'Dictionary of Birds' does not always refer his readers to the fullest printed accounts of particular subjects.

We are sorry to see (p. 237) the repetition of what we regard as an utter fallacy, that falcons are useful in destroying game-

birds "that show signs of infirmity." We are of course aware that this statement has long become stereotyped; but we have seen such numbers of grouse and partridges killed by trained falcons, that we have no hesitation in saying that a Peregrine can knock down any bird it pleases with the greatest ease, and will stoop at the first bird of a covey which it catches sight of, quite regardless of whether it is the strongest or weakest. Of this fact we have been often an eye-witness. We may add that this was long ago demonstrated by Lieut.-Col. Delmé Radcliffe and by Col. Whyte. (See 'The Field,' 18th April, 1863).

Having thus indicated some of the names which in our opinion ought not to have been omitted from the 'Dictionary,'—some of which, like "Attagen," "Beccafigo," and "Berkut," are really important,—we will devote a few lines to a consideration of some that might well have been dispensed with. Amongst these we would place "Chacalaca," "Chok," "Curucui," "Corrira," "Fasceddar," and "Kalkoentje." These, and several others that might be mentioned, are not accepted English words, and, as it seems to us, stand upon a different footing to such names for instance as "Caracara," "Huia," and "Jacana," which, though introduced words, are generally recognized and frequently used. Moreover, if the names in question are to be admitted, why exclude "Arapunga," "Boclora," "Cuia," "Houtou," "Ibibirou," and other native names to be found in Waterton's 'Wanderings in South America'? At the same time we are far from saying that it would not be a most useful piece of work to identify the birds whose scientific names were persistently ignored by the English wanderer in Demerara.

One other shortcoming we have to notice, namely, the desirability of having more cross references. Of this a single example will suffice. There is a curious bird frequenting the east coast of Africa, from the Red Sea to Natal, as well as the northern and eastern shores of the Indian Ocean, the Bay of Bengal, and many of the intervening islands. To all scientific ornithologists it is known as *Dromas*, yet this name is not in the Dictionary, though we find the bird dealt with under the familiar Anglo-Indian name, "Crab-plover." Here the insertion of the words "Dromas, see Crab-plover," would have been useful. Add also "Chionis, see Sheathbill."

And now having pointed out a few instances in which, as it

seems to us, there is room for emendation, let us refer to some of the merits of the work, which far outweigh the faults,—if such they may be called,—to which we have directed attention. There are many articles of an encyclopædic character, of the value of which it would be impossible to speak too highly. They are full of information, clearly and concisely written, and so far as they go extremely accurate. What more can be said? We would especially refer to the articles, Anatomy, Brain, Digestive System, Eggs, Embryology, Extermination, Feathers, Fossil Birds, Geographical Distribution and Migration; and as regards particular species, to Avocet, Bird of Paradise, Bustard, Crane, Dodo, Emeu,* Gare-fowl, Lark, and Megapode, all admirable examples of accurate and condensed information.

Professor Newton has been singularly fortunate in his coadjutors, and their names as given on the title-page, above quoted, are a sufficient guarantee of the value of their contributions. In particular we would remark that Mr. Lydekker's article on Fossil Birds has supplied a gap in ornithological literature which has long been too apparent; while the contributions on Anatomy and Physiology by Dr. Gadow, and on Osteology by Dr. Shufeldt, leave nothing to be desired.

As regards the illustrations, they are for the most part excellent; and we are glad to notice the reproduction of Swainson's woodcuts of heads and feet, which have been too generally overlooked, and which for accuracy have seldom been surpassed. We look forward with pleasurable anticipation to the publication of the two Parts with which the work is to be concluded.

* We may take exception here to the statement (p. 214) that "the Emeu is the only form of Ratite bird which naturally takes to the water;" for we have it on the authority of Darwin and Dr. Cunningham that this habit has been observed in the American Rhea. See 'Ostriches and Ostrich-farming,' p. 58. Nor is it quite correct to say (p. 80) that it is the custom of the Ratitæ for the eggs to be invariably incubated by the male birds. See 'Nature,' March 22nd, 1883. One other criticism with reference to Ostriches may be here advanced. It is stated (p. 190, note) that "it is curious that Ostriches' eggs from North Africa are to be readily distinguished from those from the Cape of Good Hope by their smooth ivory-like surface without any punctures, whereas southern specimens are rough as though pock-marked; yet no other difference that can be deemed specific has as yet been established between the birds of the north and of the south." The explanation of this difference in the surface of the egg-shells is said to be that the eggs of the North African Ostrich brought to this country are usually procured from the Arabs, whose practice it is to get rid of the rough surface, and as they think improve the appearance of the eggs by rubbing and polishing them between their hands with sand! But see Tristram, 'Ibis,' 1860, p. 74.



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CONTENTS.

-On the alleged former Nesting of the Osprey in the English Lake District, *A. G. More, F.L.S.*, 1.

Notes on Birds seen in Switzerland, *O. V. Aplin, M.B.O.U.*, 3.

On the Herpetology of the Grand Duchy of Baden, *G. Norman Douglass*, 15.

NOTES AND QUERIES.

MANMAMALIA.—The Marten in Norfolk and Suffolk, *T. Southwell, F.Z.S.*, 19. Albino Squirrel, *Rev. A. Matthews, M.A.*, 20. The Polecat in N. Wiltshire, *A. G. Headley*, 20. The Polecat in Northamptonshire, *Rt. Hon. Lord Lilford, F.L.S.*, 20.

CETACEA.—Bottle-nosed Dolphin on the Lincolnshire Coast, *C. H. C. Haigh*, 21.

BIRDS.—Feeding Wild Sea Gulls, Jackdaws, and Pigeons, 21. Rough-Legged Buzzard in West Sussex, *Rev. H. D. Gordon, M.A.*, 22. Sabine's Gull near Bournemouth, *F. Coburn*, 22. Sabine's Gull in Cornwall, *T. H. Cornish*, 22. Ornithological Notes from Worcestershire, *F. Coburn*, 23. Ground-building Birds removing Egg-shells, *Robert Godfrey*, 23. The Stone Curlew in Kent; The Kentish Plover, *Capt. Willoughby Verner*, 24. Late appearance of Hirundinidæ in North Norfolk, *Col. H. W. Feilden*, 24. Albinos and White Varieties, *Edgar R. Waite*, 25. Spotted Eagle in Suffolk, *Pratt & Son*, 25. Grey Phalarope in Leicestershire, *Rev. A. Matthews, M.A.*, 26. Grey Phalarope and Arctic Tern in Warwickshire, *F. Coburn*, 26. Grey Phalarope in Ireland, *Robert Patterson*, 26. Hobby preying on Swallows, *G. B. Corbin*, 26. Great Northern Diver off Brighton, *H. Swaysland*, 27. Baillon's Crake in Hertfordshire, *W. H. M. Ayres*, 27. Rare Birds in North Devon, *Rev. Murray A. Mathew, M.A.*, 27. Petrels and Phalarope in the Isle of Man, *P. Ralfe*, 28. Grey Phalarope in Devon, *Wm. E. H. Pidsley*, 28. Red-necked Phalarope in Ireland, *E. Williams*, 28. Nesting of the Magpie, *S. A. Davies*, 29. Raptorial Migrants in East Anglia; Buffon's Skua in West Suffolk, *Rev. Julian G. Tuck, M.A.*, 29, 30. Nidification of the Bar-tailed Godwit, *H. W. Marsden*, 30. Songs of Birds reared from the Nest, *A. G. Butler, F.L.S.*, 30. Persistent Brooding of the Ringed Plover, *Frank Brownsword*, 32. Additions to the Avifauna of Donegal, *H. Chichester Hart, B.A., F.L.S.*, 32. Pink-footed Goose in Ireland; Roller in Co. Donegal, *Robert Patterson*, 33. Bernacle Goose at North Berwick, *F. Coburn*; at Scarborough, *Wm. J. Clarke*, 33. A White Java Sparrow, *Percy F. Bunyard*, 33. Bittern in Co. Meath, *John Benson*, 33. Fork-tailed Petrel in Ireland, *R. Patterson*, 34. Rare Birds at Kingsbridge, S. Devon, *Edmund A. Elliot*, 34. Variation in Plumage of Woodpeckers and Nuthatch, *G. B. Corbin*, 35. Spotted Redshank in Co. Dublin, *E. Williams*, 35.

FISHES.—Bonito on the Cornish Coast, *T. H. Cornish*, 36.

SCIENTIFIC SOCIETIES.—Linnean, 36. Zoological, 37. Entomological, 39.

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CONTENTS.

Migration in the Humber District in the Autumn of 1892, *John Cordeaux*, 418.

NOTES AND QUERIES.

Presentation to the Rev. Leonard Blomefield, M.A., F.L.S., 420.

MAMMALIA.—Stone in a Horse's Stomach, *Walter Chamberlain*, 421. Importation of Hares from New Zealand, *Thomas Christy*, 421. Observations on the Mole, *Lionel E. Adams*, 421.

BIRDS.—Ruff in Nottinghamshire, *J. Whitaker*, F.Z.S., 423. Sabine's Gull in Norfolk, *Col. H. W. Feilden*, 423. Sabine's Gull in Pembrokeshire, *Charles Jeffreys*, 423. Pomatorhine Skua and Fulmar Petrel in Mayo, *Robert Warren*, 423. Buff Variety of the Swallow and Flycatcher, *H. G. Charbonnier*, 423. Late Nesting of the Tawny Owl in Scotland, *R. Service*, 424. Garganey in Holderness; Rare Wheatear seen near Spurn; Barred Warbler in Holderness, *John Cordeaux*, 424. Nesting of the Great Crested Grebe in the North of Ireland; Eared Grebes in Anglesea, *Rev. Alan Ellison*, 425, 426. Ruddy Sheldrake in North Devon, *F. H. Carruthers Gould*, 426; *H. A. Evans*, 427. Notes from Devonshire, *Wm. Helman-Pidsley*, 427. Manx Shearwater in Somersetshire; Nesting of the Quail in Devonshire, *F. H. Carruthers Gould*, 427. Quail in Sussex, *M. Burr*, 427. Marked Woodcocks, *E. G. Wheeler*, 427. Notes from Sussex, *G. W. Bradshaw*, 428. Honey Buzzard in Co. Wexford, *E. Williams*, 428. Supposed occurrence of the Purple Heron in Lancashire, *Chas. Oldham*, 428. Tufted Duck in Norfolk, *T. E. Gunn*, 428. Bee-eater in Co. Wicklow, *E. Williams*, 428. Peahen assuming the Male Plumage, 428. Food of the Jay; Spotted Redshank in Summer Plumage in November, *J. H. Gurney*, F.Z.S., 429. Fork-tailed Petrel near Macclesfield, *Newman Neave*, 429. Breeding of the Cuthroat, or Ribbon Finch, *Arthur G. Butler*, F.Z.S., 429.

SCIENTIFIC SOCIETIES.—Linnean, 430. Zoological, 432. Entomological, 434.

NOTICES OF NEW BOOKS.—'A Vertebrate Fauna of Lakeland; including Cumberland and Westmorland, with Lancashire north of the Sands,' by Rev. H. A. Macpherson, M.A.; with a Preface by R. S. Ferguson F.S.A., 436. 'The Birds of Devon,' by W. S. M. D'Urban, F.L.S., F.E.S., and the Rev. Murray A. Mathew, M.A., F.L.S., 438. 'The Fauna and Flora of Gloucestershire,' by C. A. Witchell and W. B. Strugnell, 441. 'Catalogue of Eastern and Australian Lepidoptera-Heterocera in the Collection of the Oxford University Museum,' by Colonel C. Swinhoe, F.L.S., F.Z.S., F.E.S., 446. 'Les Coquilles Marines des Côtes de France,' par Arnauld Locard, 447.

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CONTENTS.

Notes on some Land Shells collected at Much Hadham, Herts. *G. T. Rope*, 1.
Ornithological Notes from Redcar for 1891-92, *T. H. Nelson* and *Frank Pilling*, 3.
Ornithological Notes from Mid-Hants for 1892, *Sutton A. Davies*, 8.
Memoir of the late Sir Richard Owen, K.C.B., LL.D., F.R.S., 14.

NOTES AND QUERIES.

The late Mr. H. T. Stainton, F.R.S., 18.

MAMMALIA.—The Deer of British Guiana, *J. J. Quelch*, 19. Old English Black Rat at Bristol, *Charles Garnett*, 19.

CETACEA.—Bottle-nosed Whale on Lincolnshire Coast, *G. H. Caton Haigh*, 20.

BIRDS.—Experiences in breeding Parson Finches, *Arthur G. Butler*, F.L.S., 20. Macqueen's Bustard on the Yorkshire Coast, *Richard Howse*, 21. Great Grey Shrike in Surrey, *Ernest S. Salmon*, 22. Fork-tailed Petrel in Somersetshire, *F. A. Knight*, 22. Red-throated Diver and Spotted Crake in Somersetshire, *H. B. Goldsmith*, 22. Additional Notes on the Birds of Donegal, *H. C. Hart*, F.L.S., 22. Barn Owl breeding in Confinement, *H. C. Hewitt*, 23. Velvet Scoter in W. Suffolk, *Rev. J. G. Tuck*, M.A., 23. Peahen assuming Male Plumage, *J. H. Gurney*, F.Z.S.; *Rev. J. G. Tuck*, 23. The Spotted Crake in Scotland, *Robert Service*, 24. The Sheldrake in Captivity, *H. C. Hewitt*, 24. Bitterns in Wilts, *Rev. Alfred Chas. Smith*, M.A., 24. Notes from Heligoland, *John Cordeaux*, 25. Singular Accident to a Greenfinch, *Wm. Farren*, 25. Proportion of Adult and Immature Birds amongst Accidental Visitors to the British Isles, *John Cordeaux*, 26. Ring Ouzel in Scotland in Winter, *R. Service*, 27. Supposed occurrence of *Loxia leucoptera* in Herts, *H. S. Rivers*, 27. The Antarctic Sheathbill on the Coast of Ireland, *Richard M. Barrington*, LL.D., F.L.S., 28. Bullfinches and Lilac Seeds, *Henry Laver*, F.L.S., F.Z.S., 29. Bittern in Dorset, *W. D. Slade*, 29. Little Grebe killed by Telegraph-wires, *Robert Service*, 29. Quail in Winter in S. Hants, *J. Stares*, 29. Wagtail's Nest in November, *A. H. Etches*, 30.

REPTILIA.—Venom in Harmless Snakes, *J. J. Quelch*, 30.

SCIENTIFIC SOCIETIES.—Linnean, 32. Zoological, 33. Entomological, 35.

NOTICES OF NEW BOOKS.—'Text-Book of the Embryology of Man and Mammals,' by Dr. Oscar Hartwig; translated from the 3rd German Edition by Edward L. Mark, Ph.D., 37. 'The Life of a Foxhound,' by John Mills, 39. 'Delagoa Bay: its Natives and Natural History,' by Rose Monteiro, 39.

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CONTENTS.

Gilbert White and his Sussex Connections, *Rev. Prebendary H. D. Gordon, M.A.*, 441.

Ornithological Notes from Leicestershire, *F. B. Whitlock*, 450.

NOTES AND QUERIES.

Zoological Maps, *Rev. Murray A. Mathew, M.A.*, 457.

MAMMALIA.—European Beavers at the Zoological Gardens, *The Editor*, 457. Albino Squirrel, *H. W. Marsden*, 457. Natterer's Bat in South Lancashire, *Chas. Oldham*, 457. Serotine in Sussex, *W. B. Ellis*, 453.

BIRDS.—Food of the Eider, *J. H. Gurney, F.Z.S.*, 458. Black Tern in South Lancashire, *Chas. Oldham*, 458. Woodchat in Worcestershire; Female Merganser assuming Male plumage, *F. Coburn*, 458. Curious nesting-place of Pied Wagtail; Nesting of the Spotted Flycatcher; Baillon's Crake near Nottingham, *J. Whitaker, F.Z.S.*, 458, 459. Sabine's Gull on the N.W. Coast of England, *T. H. Nelson*, 459. Night Heron near Belfast, *Robert Patterson*, 459. Sabine's Snipe in Co. Donegal, *B.A., F.L.S.*, 459. Long-tailed Duck in Sussex, *George W. Bradshaw*, 460. The Birds of Pembroke-shire, *Rev. Murray A. Mathew, M.A.*, 460.

REPTILES.—Adders useful in destroying Voles, *Robert Service*, 460.

SCIENTIFIC SOCIETIES.—Linnean, 461. Zoological, 462. Entomological, 464.

NOTICES OF NEW BOOKS.—'A Dictionary of Birds,' by Alfred Newton, assisted by Hans Gadow, with Contributions from Richard Lydekker, Charles Roy, and R. W. Shufeldt, Parts I. and II., 465.

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